

# Adolescent Literacy: Wordy Study With Middle and High School Students

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*A Case Study Published in*

***TEACHING Exceptional Children Plus***

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*Volume 3, Issue 4, March 2007*

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## Abstract

Literacy is an increasingly important factor as schools focus on improving student achievement. Literacy skills in reading and writing are critical components needed for both access to the general curriculum and for successful academic achievement. A key component of reading and writing is word identification, a skill deficit for many adolescent students with learning disabilities. This article describes how we implemented Words Their Way, an explicit, inductive instructional approach to teach phonemic awareness, spelling patterns, and morphology to students in a ninth grade literacy class in an urban high school. The orthographic knowledge learned through word study is applied to word identification skills used in reading and writing. The article explains how we adapted this program for adolescents who are struggling with reading and writing.

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## Keywords

adolescent literacy, word study, word identification

### Acknowledgments:

Thank you to Bridget Belknap and Maiko Callister for their willingness to try something new, and my sincere appreciation to both Dr. Juliana Taymans and Dr. Kate Tindle for their support throughout the project.

### SUGGESTED CITATION:

Harris, L.A. (2007). Adolescent literacy: Wordy study with middle and high school students. *TEACHING Exceptional Children Plus*, 3(4) Article 4. Retrieved [date] from <http://escholarship.bc.edu/education/tecplus/vol3/iss4/art4>

## **Adolescent Literacy: How are we doing?**

More than eight million students in grades 4-12 are struggling in reading. According to the National Assessment of Educational Progress Report, two out of three eighth grade students, as well as two out of three twelfth grade students are not proficient in reading. Additionally one in four twelfth grade students read far below grade level (U.S. Department of Education, 2003). The outcomes for writing are not any more encouraging. While there have been significant changes in scores for fourth grade and higher achieving eighth graders, there has been no significant change in low performing eighth graders or in any of the twelfth grade students.

As schools focus on improving outcomes, students that lack literacy skills when they enter middle or high school are not achieving and they are not receiving the support and instruction they so desperately need. Approximately half of incoming ninth grade students in high poverty, urban schools read at a sixth or seventh grade level (Balfanz, 2002). Yet, content area textbooks are written for proficient readers with student learning assessed through written assignments. This situation places many ninth grade students at risk for failing. This article describes how *Words Their Way: Word Study for Phonics, Vocabulary, and Spelling Instruction* (Bear, Invernizzi, Templeton, Johnston, 2004) was implemented in a high poverty, urban high school with ninth grade students who were reading three to six years below grade level.

Literacy skills in reading and writing are critical components needed for both access to the general curriculum and

for successful academic achievement. A key component of reading and writing is word identification, a skill deficit that many adolescent students with learning disabilities still struggle with. Elementary educators are prepared to systematically teach students to decode and read words accurately as these essential skills are a focus in the elementary curriculum. On the other hand, secondary teachers are not prepared to teach students with deficits in word identification as middle and high school curricula are written with the assumption that students have developed a basic proficiency in reading and writing. Yet assessment of student performance tells us otherwise.

### **Adolescent Literacy:**

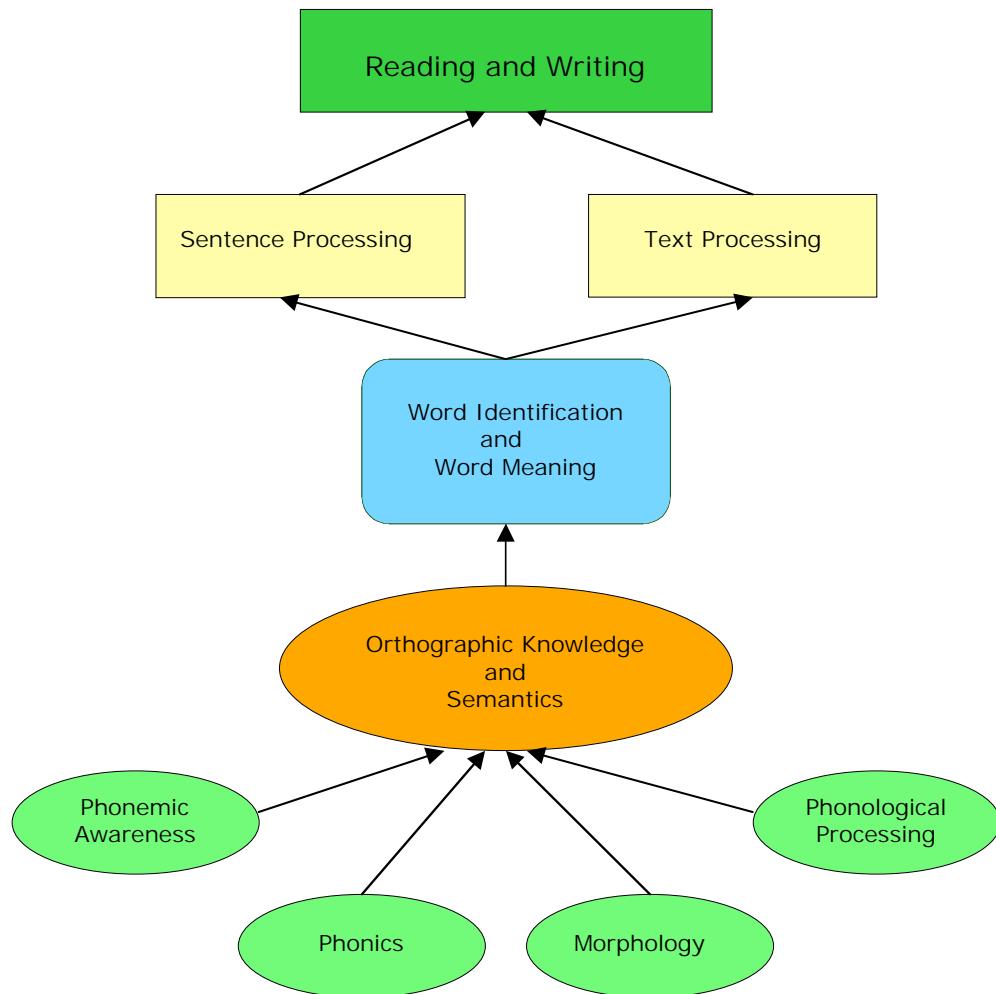
- More than eight million students in grades 4-12 are struggling readers
- 2 in 3 high school students read below grade level
- Only 31% of 8<sup>th</sup> grade students and 24% of 12<sup>th</sup> grade students are performing at or above the writing proficiency level

From: National Assessment of Educational Progress 2003

## **Middle and High School Literacy Curriculum**

Teachers have few curriculum options when facing adolescents with significant word identification needs. Word identification, whether by automatic recognition of the entire word (sight reading) or by sounding out the word (decoding) or by recognizing prefixes, suffixes and root words (morphology), is based on the development of orthographic knowledge. Orthographic knowledge, the correct se

**Figure 1. The role of orthographic knowledge in the reading and writing process**



quence of letters in a writing system, is a critical component used in word identification (Chomsky, 1971; Henderson, 1981; Read, 1971) and is an underlying skill upon which higher-level reading and writing is built.

For middle and high school students struggling with reading and writing, orthographic knowledge is an overlooked building block for higher achievement. There is a high correlation between learn-

ing to spell words and learning to read words, as the underlying processes and knowledge base used to spell are much the same as reading (Ehri, 2000). Torgenson (2001) states that “there is now overwhelming evidence that most children with reading disabilities experience a major bottleneck to reading growth in the areas of skilled word identification” (p. 35). Orthographic knowledge plays a critical role in the acquisition of fluid de-

coding skills that is so crucial for word identification and fluency in reading (Adams, 1990). Two well recognized, research based programs used with struggling adolescent readers are The Word Identification Strategy (Lenz & Hughes, 1990) and the Corrective Reading program (Engelmann, Hanner, & Johnson, 1989). Both use direct instruction procedures and intensive small group instruction. The direct instruction format, which is mostly teacher centered during the initial stages of instruction, does not always motivate and engage adolescent learners. Additionally, these programs are less feasible to implement when teachers are faced with large groups of students.

Words Their Way (WTW), the study of words through the exploration of the orthographic knowledge of words, is an alternative method of instruction. WTW is an explicit, inductive instructional approach to teach phonemic awareness, spelling patterns, and morphology to improve word identification. The orthographic knowledge learned through word study is applied to both decoding used in reading and encoding used in writing.

### **Words Their Way**

WTW focuses on word study through activities in which students “examine, discriminate, and make critical judgments about speech sounds, word structures, spelling patterns, and meanings” (Bear et al., 2004, p. 2). The specific word patterns studied depend on the orthographic level of the student. Figure 2 outlines the orthographic stages listing some characteristics and common spelling errors.

WTW’s focus on the stages of orthographic development is based on

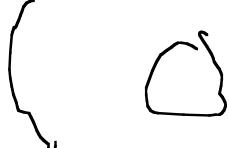
Henderson’s (1981) work that demonstrated children progress through predictable stages when learning to spell the English language. Further studies by Invernizzi and Worthy (1989) found that children with learning disabilities progressed through these same stages. In 1996, Viise discovered that adult literacy learners also progressed through similar stages when learning to spell. By basing spelling instruction on the orthographic stages, WTW presents spelling in a clearly sequenced format allowing students to view the English orthographic system systematically. Rather than viewing the English language as a haphazard array of letters, students discover that words are made of sounds, patterns and meanings.

WTW incorporates the application of spelling patterns to both reading and writing. Word study through examining the sound, pattern and meaning of a word supports vocabulary development and facilitates reading (Moats, 2005). Bear et al. (2004) discuss the developmental stages of spelling and how each stage corresponds to reading and writing development. This is outlined in Figure 3. We found the blending of literacy skills in WTW to be an asset of the program.

### **Infusion into a Ninth Grade Literacy Class**

WTW was one component of a balanced literacy curriculum that two pre-service special education teachers infused into a ninth grade literacy class of 15 students. The literacy class was a regular education class composed of students receiving special education services, students with ESL needs, and students in regular education identified as at risk due to their elementary level reading and writ

**Figure 2. Stages of Orthographic Knowledge**

Developmental Level	Characteristics	Examples
1 <i>Emergent Spelling</i> Typical for preschool	* Able to grasp a writing utensil * Can make scribbles * The scribbles are lines and circles that begin to approximate letters, but there is no sound symbol correspondence.	
2 <i>Letter - Name Alphabetic Stage</i> Typical for early elementary	* Attention to consonant sounds and corresponding letters * Ability to divide words into sound sequences * Long vowel sounds are recognized * When spelling words with two vowels, usually only one vowel is represented	BD for bed R for are FOT for float BAKR for baker PLAS for place
3 <i>Within Word Stage</i> Typical for late elementary	* Has a sight-reading vocabulary of 200 – 400 words * Automatic knowledge of letter sounds including short and long vowel sounds	FLOTE for float PLAIS for place SPOLE for spoil CHUED for chewed
4 <i>Syllables and Affixes Stage</i> Typical for late elementary	* Mastery of one syllable short and long vowels * Focus on suffixes (-ed and -ing) * Focus on double consonants (i.e., occasion, success) * Examination of influence of <i>r</i> and <i>w</i> on spelling patterns (i.e., garden, wardrobe) * Study of accented syllables	CONFEDENT for confident SHOPING for shopping I signed the contract or I may contract the disease
5 <i>Derivational Relations Stage</i> Typical for middle school	* Spelling-meanings connections * Learn common prefixes & suffixes * Learn meaning of base words * Latin and Greek root origins are examined	CLORIFIL for chlorophyll REVERSABLE for reversible INDITEMENT for indictment

Note. Adapted from *Words Their Way: Word Study for Phonics, Vocabulary, and Spelling Instruction* by Bear et al., 2004, Pearson Education, Inc.

**Figure 3. Spelling development with corresponding reading and writing development**

<i>Spelling</i>	<i>Reading</i>	<i>Writing</i>
Emergent	Pre-reading	Pretend writing
Letter Name-Alphabetic	Reads predictable pattern books	Writes individual letters and simple words
Within Word Pattern	Reads phrases instead of individual words	Writes sentences and simple paragraphs
Syllables & Affixes	Word recognition is automatic	Writes complex sentences and longer paragraphs
Derivational Relations	Reads more complex texts	Writes multiple paragraphs

ing skills. Initial Qualitative Reading Inventory (QRI) Assessments indicated that reading levels for the class were between the third and sixth grade level. The literacy class met daily for one block, 86 minutes each, for one semester. WTW instruction was delivered for the first 20 minutes of every other class. Every student in the class participated.

### Assessment

The first step was to assess the students using the spelling inventory included in WTW. The inventory consists of students spelling up to 40 words that represent different spelling patterns from the five stages of orthographic development. WTW provides a primary, elementary, intermediate, and upper level inventory. We level inventory. We administered the Elementary Spelling Inventory to the entire class. Four of the fifteen students demonstrated mastery of this level and were

given the Intermediate Spelling Inventory. Each inventory took 20 minutes to administer and yielded a tremendous amount of information not only for the teacher, but also for the student and the parent. With the results of the inventory, we used WTW's Feature Guide to identify specific spelling patterns mastered and identified each student's stage of orthographic development. Using WTW's Classroom Composite form we efficiently established a class profile of phonemic spelling patterns mastered and patterns that needed to be taught. Students fell within stages three, four and five; within word, syllables and affixes, and derivational stages of spelling development. We were not surprised, as it is estimated that one fourth of the adult population is stuck at stage 3, the within word pattern stage (Bear et al., 2004, p. 184). The inventory results coupled with an analysis of student written

work made it easy to group students for instruction.

#### Tips for Adolescents:

- Many adolescents with poor spelling have holes in their developmental knowledge, making it especially important to supplement the spelling inventory with writing samples. For example, the inventory might reveal that the student is in the within word spelling stage but writing samples indicate that the student consistently misspells words using ch, which is a skill from the letter name-alphabetic stage. Using both the inventory and writing samples, an accurate assessment of specific patterns mastered and patterns to be taught can be identified.

### Getting Started

Planning WTW lessons is a straightforward process, as specific lessons for each spelling pattern are provided. Each developmental stage has an accompanying manual that includes lessons in sequence. Each lesson includes the specific spelling pattern and lists of words, as well as suggested activities.

To teach the identified spelling pattern, WTW uses word sorts and sound sorts as major learning activities. Our next step was to gradually and systematically introduce these foundational activities. It was important that students learn the procedures and WTW vocabulary that they would be using throughout the semester.

Although our students were in the ninth grade, many of them were not automatic in labeling letters as consonants and

vowels. To ensure that students were comfortable with this vocabulary, our first lesson introduced the terms consonant and vowel as well as the idea of patterns. Students coded words according to consonants (C) and vowels (V). For example, *job* is CVC, *bake* is CVCE and *need* is CVVC. We concentrated on CVC, CVCE and CVVC words, as these are common patterns studied in the within word stage and are stepping stones to word patterns found in the syllables and affixes stage.

The initial reaction by some students included “Why do we have to do this, we did this in kindergarten?” Our responses included “Understanding smaller parts of words will help you to learn the more complicated words,” and “Many SAT words can be broken down into smaller parts, this helps you to read and spell them correctly”. After the initial two weeks, these comments ceased. Students enjoyed the WTW activities. In fact, on the few occasions when WTW was eliminated from the day’s lesson, students expressed disappointment.

#### Tips for Adolescents:

- We picked words that sparked the interest of this group of students. We used the name of the school, musical groups, and words commonly used in their everyday conversation. Additionally we modeled more advanced words found in their content textbooks so they could see the connection to other classes.

### Word Sorts

Word sorts are the initial learning activity for each spelling pattern studied.

The inductive approach used in word sorts allows students to focus on examining words to discover patterns and oddballs. Word sorts can be done in a large group, in small groups, or in pairs. All word sorts follow the same basic procedure: *demonstration, sort and check, reflect, and declare*. Becoming familiar with and understanding how to do word sorts was the focus of our first two lessons. By the end of the second lesson, all students were clear and comfortable with the procedures involved in performing this word study activity. The students were ready to engage in word sorts that the assessment pinpointed as an instructional starting point.

#### *Lesson 1: Introduction of Word Sorts Using Syllables and Affixes*

For our class, we introduced the word sort activity using sort #2 in the syllables and affixes stage: adding *-ing* to words. First we demonstrated the sort using the key words provided by WTW. During the demonstration we asked questions and elicited student responses. We put the key words (*get* and *ask*) and a few of the words exemplifying the pattern under the correct column.

<i>get</i>	<i>ask</i>
swim	yell
run	rest
sit	stand

We asked, “Is there anything that you notice about these base words?” At first students were silent, but after a few probes students responded with “They all have one vowel,” or “They all are verbs.” Finally they noticed that “Some are CVC,” and “Some are CVCC”. We put up the headers **VC** and **VCC** and introduced a few more words asking which column they go in.

The second step in word sorts is to have students identify the orthographic pattern. We wrote a few of the words in the *-ing* form and asked “What do you notice about the spelling when *-ing* was added?

<b>VC</b>	<b>VCC</b>
<i>get</i>	<i>ask</i>
swim	swimming
run	running
sit	sitting

Students needed additional scaffolding to answer. We prompted them to look at the **VC** column and the **VCC** column and asked, “What happened to the base word?” Our students said that in one column letters were doubled and in the other column they were not. We added the headers **Double** and **Nothing** (see below).

<b>VC</b>	<b>Double</b>	<b>VCC</b>	<b>Nothing</b>
<i>get</i>	<i>getting</i>	<i>ask</i>	<i>asking</i>
swim	swimming	yell	yelling
run	running	rest	resting
sit	sitting	stand	standing

We continued with the original list asking the students for the spelling. We asked them why they doubled the letter or why they did nothing but add -ing. Finally we asked the student to identify the pattern. Utilizing their response, we wrote their words for the pattern on the board, “When adding -ing to a VC word, double the consonant.” It is critical that student responses are elicited throughout this routine. Teachers need to be careful not to slip into telling the students the answer. WTW uses an inductive method of teaching. The high level of student engagement used in inductive teaching is an asset.

#### Tip for Adolescents:

- The inquiry process is an important component of WTW as it allows the student to discover and construct knowledge. It is important to use inquiry with questioning so that the adolescents remain in charge of their learning and discover the patterns for themselves and how the patterns affect various words. If there is disagreement about the appropriate column for a word, encourage other students to verbalize where it goes and provide explanations.

#### Tips for Adolescents:

- Use words students can easily recognize for the introductory word sort. However, use more advanced words for teaching the identified spelling pattern. Read each word first to assure that all students know the word. This can be used as an opportunity to increase vocabulary.

After identifying the orthographic pattern, students went on to sort and check. Sort and check can be done as a whole group, in small groups, or individually. We had students work in pairs with the words written on index cards. Students sorted the base words under the correct heading VC and VCC, and then they sorted the remaining words according to the pattern. While students sorted, the teacher walked around the room monitoring. We corrected mistakes by saying “I see one word in your column that doesn’t fit. Can you figure out which one?” We provided further scaffolding by asking students to identify the pattern in each word.

The last step in the word sort was to reflect and declare. While monitoring student work, the teacher questioned students about their reasoning, “Why did you sort this way?” and “Why did you put this word here?” We encouraged students to verbalize their decisions.

#### Tips for Adolescents:

- At first the students may be hesitant, looking to the teacher to provide the answers or to verify that their columns of words are correct. However, after a couple of word sorts, the students become very engaged in figuring out for themselves if they and/or their partners are sorting the patterns correctly.

#### *Lesson 2: Learning about Word Sorts: Introduction of Oddballs*

Oddballs, words that do not follow the pattern, are infused into each word sort so students can identify and categorize all words in relation to their ortho-

graphic pattern. The word *fixing* is an oddball. Although the base word ‘fix’ follows a VC pattern, one does not double the consonant before adding –ing.

For a warm-up the students got into pairs and did the word sort from lesson 1 as a review of the pattern. For the review, the same words can be used or all new words can be introduced. We used the same words.

Next, we had the students physically remain in their pairs while the concept of oddballs was introduced to the whole class. The teacher wrote the word *snowing* on the board and told the students that this was the correct spelling. We asked, “Which category does *snowing* go under?” A discussion followed with students debating the answer. Finally the group reached consensus that it does not follow either category. The teacher confirmed their conclusion and added the heading *Oddball* putting the word *snowing* underneath.

Lastly, the students engaged in a word sort with words following the pattern and with oddballs. We gave students a new set of words along with the headings *VC*, *Double*, *VCC*, *Nothing*, and *Oddball*. The students sorted this new group of words following the same procedure as used in lesson 1.

### Sound Sorts

After successfully completing a word sort, students practiced the pattern using a sound sort. Instead of looking at words, students identified the pattern by listening. Again we did this first as a whole group activity to demonstrate the procedure, and then the students paired up and practiced with their index cards.

#### Tips for Adolescents:

- Notice that WTW uses the words *patterns* and *oddballs*. This terminology is effective with adolescent students. Phonics terminology of rules and exceptions to the rules focuses students on memorization, while WTW terminology has students discovering and exploring patterns. In our experience, adolescents view phonics as an elementary school skill and often refuse to participate in this remedial instruction. When using the WTW terminology and engaging in word sorts, adolescents are engaged and challenged as they try to figure out the pattern.

The headings *VC*, *Double*, *VCC*, *Nothing*, and *Oddball* were listed. One person took an index card and read the word aloud. The second student listened and identified which column it belonged in. The student listening did not look at the written word until the other student placed it in the column indicated. When a mistake was made, it was not corrected at this time. After all the words were placed in a column, the second student looked at the words and checked the lists under each heading. Usually students recognized errors and made their own corrections. If not, the teacher or the partner student reviewed the words with them. Instead of pointing out specific mistakes, they said “Why did you put that there?” or “I see one word in our column that doesn’t fit, can you identify it?” or “I am going to say the words and you try to figure out which one doesn’t fit.”

**Tips for adolescents:**

- By allowing the students to discover their own mistakes and self-correct, adolescents maintain ownership of their learning. They remain in charge and discover for themselves the patterns of various words.

**Extension Activities**

After successful completion of word sorts and sound sorts with an identified spelling pattern, the students were ready to engage in extension activities. WTW recommends extension activities to further practice and reinforce the new orthographic knowledge. We often used word hunts to connect the spelling patterns to real life contexts. Students searched through written material identifying words that fit the pattern they were studying. Students looked in newspapers, magazine articles, the novel they were reading, and news articles on the Internet.

**Tips for adolescents:**

- We found that students liked variety within the routine. We used word hunts frequently, but we varied the materials the students used when hunting for words that illustrated a specific pattern. We also varied whether this was done individually, in pairs, or in small groups.

The majority of suggested auxiliary activities were too young for our adolescent population. We got creative and used our own activities. We extended practice with SAT words that followed the

pattern, allowing all students regardless of spelling and reading development to be exposed to higher level vocabulary and spelling. We used the whiteboard for hands on learning. Words were put on magnetic strips and students stood and manipulated the words into the correct category. Students played Jeopardy on a Smartboard. We even had students in teams running to the board with paper fans to swat the correct sound. The adolescents were active, engaged, and having fun. No longer was spelling, decoding and word identification a childish classroom activity that they moaned and shunned. It became an interactive activity where they challenged themselves to do well.

**Developing a Routine and Managing Materials**

After two weeks, the students were into a routine and were working on the patterns identified in their assessment. WTW's structure made it is easy to differentiate instruction for students with widely divergent word identification knowledge and skills. Each student had a folder containing a list of their weekly word study activities (see figure 4) and a small coin envelope with words for the identified sort. The sort and pattern were written on the outside of the envelope i.e., *Syllables and Affixes: Sort 2 Adding -ing to words with VC and VCC patterns*. After completing each activity, students initialed their weekly assignment sheet.

The week typically included a word sort and a sound sort supplemented with at least one extension activity. Students became familiar and comfortable with this routine. They came to class, gathered their materials and began to work. Using this

**Figure 4. Weekly Activity Sheet**

Name: <u>Jane Smith</u>						
Pattern: Syllables & Affixes: Adding -ing to VC and VCC patterns						
ACTIVITY	10/24	Completed	10/26	Completed	10/28	Completed
Word Sort	X	JS	X	JS		
Sound Sort			X	JS		
Word Hunt					X	JS
Sentence Writing					X	JS
Journal Entry						
Other						

system, the teacher had students in the same class working on different patterns, varying activities, and moving at their own pace. The students enjoyed the independence this system provided. They were in charge of their learning as they managed their instruction.

#### Tips for Adolescents:

- Each student kept a word study journal. After learning a pattern, students wrote the pattern and the date it was mastered in their journal. Some students wrote words learned. The journal served as both a review and a reinforcement of the progress they were making.

#### WTW: Student Achievement

In September, the class average on the spelling inventory was 44.7 out of 78 possible points. Points were earned by spelling a list of words representing various features of the different stages orthographic development. The scores ranged

from one student scoring a low of 31 and two students scoring a high of 51. At the end of the semester in January, the class average increased 14 points to 58.6 out of 78. In January, two students earned a top score of 72.

The most dramatic change came in students' comfort level with writing. Students who previously refused to write or wrote very little began writing. Over the course of the semester, the length of their writings increased. Students who were struggling in writing were no longer covering up their deficiencies. The fear of writing dissipated.

#### Conclusion

Word study is a missing component in many middle and high school classrooms. Given the success of inductive learning for adolescents and the need for explicit phonics instruction in secondary schools, we encourage teachers to search out techniques that capitalize on these needs. WTW is one way to infuse word study instruction into a literacy cur-

riculum addressing the needs of middle and high school students who struggle with reading and writing. Using WTW to study orthographic patterns gives middle and high school students the opportunity to systematically gain skills in reading, writing, and spelling and to advance to the next developmental level.

#### Word Study Using Words Their Way:

- Focus on spelling, decoding, and vocabulary
- Active hands on learning
- Construction of orthographic knowledge
- Encouragement of critical thinking skills

An interview with one of the pre-service teachers during her first year of teaching revealed that she continued to use WTW. Even though the program guide includes elementary activities, the teacher experienced that WTW was adaptable and useful for adolescent students. She comments, “Don’t shy away from WTW because of the initial elementary-looking pictures. Don’t be afraid to modify it for your specific students because the students really need the underlying skills that WTW teaches.”

Textbooks are filled with content vocabulary that is foreign to many students. Having orthographic knowledge about patterns and derivations of words helps to unlock both the spelling and the meaning of content based vocabulary. Word study focusing on the underlying phonemic/grapheme/morphemic relationship of sound/letters/meanings can aid decoding and comprehension of content area text for all students. By utilizing a faster,

more accurate recognition of words in reading, along with a faster, more accurate production of words in writing, students focus their attention on making meaning, thus increasing their abilities to be successful in today’s rigorous high school curriculum.

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